7

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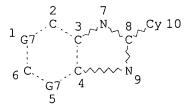
FILE COVERS 1907 - 26 Apr 2002 VOL 136 ISS 18 FILE LAST UPDATED: 25 Apr 2002 (20020425/ED)

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CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> =>

=> d stat que 16 L1 STR



VAR G7=CH/N NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L2 34579 SEA FILE=REGISTRY SSS FUL L1

L3 STR

 $G4 \sim N \sim G4$   $C \sim G6$   $O \sim C$  19 @20 21 @22 23 @24 25

VAR G1=CH/11

VAR G2=OH/X/ME/13/16/NH2/17/20

REP G3=(0-6) C

VAR G4=ME/ET/I-PR/N-PR/I-BU/N-BU/T-BU/S-BU/13/CB

VAR G5=CH/22

VAR G6=X/16/NH2/17/20/24

VAR G7=CH/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L4 20432 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L5 9122 SEA FILE=HCAPLUS ABB=ON PLU=ON L4

L6 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L5(L)(?DIABET? OR BLOOD(W)SUGA

R)

=>

=>

 $\Rightarrow$  d ibib abs hitrn 16 1-15

L6 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:

2002:51257 HCAPLUS

DOCUMENT NUMBER:

136:123595

TITLE:

SOURCE:

A combination of phosphonate or phosphorodiamidate FBPase inhibitors and antidiabetic agents useful for

the treatment of diabetes

INVENTOR(S):

Van Poelje, Paul D.; Erion, Mark D.; Fujiwara,

Toshihiko

PATENT ASSIGNEE(S):

Metabasis Therapeutics, Inc., USA; Sankyo Company,

Limited

PCT Int. Appl., 392 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

```
PATENT NO.
                                  DATE
                           KIND
                                                     APPLICATION NO.
      WO 2002003978
                            Α2
                                  20020117
                                                    WO 2001-US21557
                                                                         20010705
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
                LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
                RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
                UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
           RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
                DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
                BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                                 US 2000-216531P P 20000706
PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
                              MARPAT 136:123595
GΙ
```

Me CO<sub>2</sub>Et 
$$H_2N$$

O P  $O$ 

NH  $I-Bu$ 

AcO  $O$ 

CO<sub>2</sub>Et  $I$ 

AcO  $O$ 

OAC  $II$ 

AΒ A combination therapy of at least one FBPase inhibitor ((R1Y)2P(O)M and R14C(0)(CR12R13)nN(R18)P(0)(NR15R16)M; e.g. 2-amino-5-propylthio-4-(5phosphono-2-furanyl)thiazole monohydrobromide and 2-amino-5-isobutyl-4-[2-[N,N'-bis[(S)-1-(ethoxycarbonyl)ethyl]phosphonodiamido]-5-furanyl]thiazole (shown as I)) and at least one other antidiabetic agent (insulin secretagogue; e.g. glyburide, a sulfonylurea) is disclosed. (R1Y)2P(O)M and R14C(O)(CR12R13)nN(R18)P(O)(NR15R16)M are converted in vivo or in vitro to MPO32-, which inhibit FBPase; the substituents are defined in the claims. General methods and about 15 specific example prepns. of the phosphorus compds. are included but no methods of prepn. are claimed. the biol. examples, data is presented for the following for selected phosphorus compds. and other materials: inhibition of human liver FBPase, inhibition of rat liver and mouse liver FBPase, inhibition of gluconeogenesis by an FBPase inhibitor in rat hepatocytes, inhibition of glucose prodn. and elevation of fructose-1,6-bisphosphate levels in rat hepatocytes treated with FBPase inhibitors, anal. of hepatic and plasma drug metabolite levels, blood glucose, and hepatic fructose 1,6-bisphosphate levels after administration of compd. A (shown as II) p.o. to normal fasted rats, anal. of hepatic and plasma drug levels after administration of compds. i.p. to normal fasted rats, oral bioavailability detn. of two compds. and oral glucose lowering activity of two compds. For insulin secretagogues: insulin release from pancreatic islets, glucose lowering in the fasted rat, i.v. glucose tolerance in the fasted rat, oral glucose tolerance in the Zucker diabetic fatty rat, insulin secretion in the rat, inhibition of KATP-channels in mouse pancreatic beta-cells, and sulfonylurea receptor binding. Also included are: inhibition of

dipeptidyl peptidase IV (DPP-IV inhibitors), alpha-glucosidase assay, glycogen phosphorylase assay, assay of glucose 6-phosphatase inhibitors, qlucagon antagonist assay, amylin agonist assay, fatty acid oxidn. inhibitor assay, glucose lowering in the db/db mouse (FBPase inhibitor), glucose lowering in the ZDF rat, acute combination treatment of an insulin secretagogue and an FBPase inhibitor in the ZDF rat, chronic combination treatment of an insulin secretagogue and an FBPase inhibitor in the ZDF rat, acute combination treatment of insulin and an FBPase inhibitor in db/db mice, beneficial effect of chronic combination treatment of insulin and an FBPase inhibitor in db/db mice, and beneficial effect of chronic combination treatment of insulin and an FBPase inhibitor in db/db Mice. Also included are: acute combination treatment of insulin and an FBPase inhibitor in the Goto-Kakizaki rat, acute combination treatment of a biguanide and an FBPase inhibitor in db/db mice, acute combination treatment of an alpha glucosidase inhibitor and an FBPase inhibitor in Goto-Kakizaki rats, acute combination treatment of a glycogen phosphorylase inhibitor and an FBPase inhibitor in db/db or ob/ob mice, acute combination treatment of a glucose-6-phosphatase inhibitor and an FBPase inhibitor in db/db or ob/ob mice, acute combination treatment of an FBPase inhibitor and an amylin agonist, chronic combination treatment of a fatty acid oxidn. inhibitor and an FBPase inhibitor in the streptozotocin-induced diabetic rat.

#### 213247-37-1 TΤ

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combination of phosphonate or phosphorodiamidate FBPase inhibitors and antidiabetic agents useful for treatment of diabetes)

ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2002 ACS 2001:916027 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 136:200160

TITLE: Orally-Effective, Long-Acting Sorbitol Dehydrogenase

Inhibitors: Synthesis, Structure-Activity

Relationships, and in Vivo Evaluations of Novel Heterocycle-Substituted Piperazino-Pyrimidines

AUTHOR(S): Chu-Moyer, Margaret Y.; Ballinger, William E.; Beebe, David A.; Berger, Richard; Coutcher, James B.; Day,

Wesley W.; Li, Jiancheng; Mylari, Banavara L.; Oates,

Peter J.; Weekly, R. Matthew

CORPORATE SOURCE: Departments of Cardiovascular and Metabolic Disease

and Drug Metabolism Development, Pfizer Global

Research and Development, Groton Laboratories, Groton,

CT, 06340, USA

SOURCE: Journal of Medicinal Chemistry (2002), 45(2), 511-528

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English GT

Optimization of a previously disclosed sorbitol dehydrogenase inhibitor AB (SDI, I) for potency and duration of action was achieved by replacing the metabolically labile N,N-dimethylsulfamoyl group with a variety of heterocycles. Specifically, this effort led to a series of novel, in vitro potent SDI's, e.g. the [[(hydroxymethylpyrimidinyl)piperazinyl]pyrim idinyl]ethanol II, with longer serum half-lives and acceptable in vivo activity in acutely diabetic rats. However, the desired in vivo potency in chronically diabetic rats, ED90 .ltoreq. 5 mg/kg/day, was achieved only through further modification of the piperazine linker. Several members of this family, including [[(hydroxyethylpyrimidinyl)dimethylpiperazinyl]pyri midinyl]ethanol III, showed better than the targeted potency with ED90 values of 1-2 mg/kg/day. III was further profiled and found to be a selective inhibitor of sorbitol dehydrogenase, with excellent pharmacodynamic/pharmacokinetic properties, demonstrating normalization of sciatic nerve fructose in a chronically diabetic rat model for .apprx.17 h, when administered orally at a single dose of 2 mg/kg/day.

IT 400785-12-8P 400785-22-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and structure-activity relationships of oral antidiabetic, sorbitol dehydrogenase-inhibiting heterocylic piperazinopyrimidines)

IT 57260-68-1 145909-56-4

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and structure-activity relationships of oral
 antidiabetic, sorbitol dehydrogenase-inhibiting heterocylic
 piperazinopyrimidines)

IT 400785-04-8P 400785-05-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and structure-activity relationships of oral antidiabetic, sorbitol dehydrogenase-inhibiting heterocylic

piperazinopyrimidines)

REFERENCE COUNT: 50

THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:

2001:824351 HCAPLUS

DOCUMENT NUMBER:

136:112467

TITLE:

Effect of telmisartan on arterial distensibility and central blood pressure in patients with mild to moderate hypertension and type 2 diabetes mellitus

Asmar, Roland AUTHOR(S):

CORPORATE SOURCE:

The Cardiovascular Institute, Paris, 75016, Fr.

SOURCE:

JRAAS (2001), 2(Suppl. 2), S8-S11 CODEN: JRAAAG; ISSN: 1470-3203

JRAAS Ltd. PUBLISHER: DOCUMENT TYPE: Journal LANGUAGE: English

Arterial wall stiffness is an important independent risk factor for cardiovascular disease in hypertensive patients, which is further exacerbated by co-existent diabetes mellitus. Increased arterial stiffness is directly assocd. with an increase in pulse wave velocity (PWV) and indirectly with increased central and peripheral blood pressure. Following a two-week placebo run-in period, 27 patients with mild to moderate essential hypertension and Type 2 diabetes mellitus, were randomized to once daily treatment with either telmisartan 40 mg or placebo for three weeks, and after a two-week washout period, crossed-over to the alternative treatment for a further three weeks. Carotid/femoral and carotid/radial PWV were measured non-invasively using the automatic Complior device, and central parameters (central blood pressure, pulse contour anal., and augmentation index) were measured using the SphygmoCor system, at the start and end of each treatment period. Compared with placebo, treatment with telmisartan significantly reduced carotid/femoral PWV (mean adjusted treatment difference -0.95 m/s, 95% confidence intervals: -1.67, -0.23 m/s, p=0.013), as well as peripheral and central diastolic, systolic and pulse pressure. In conclusion, the results of this study show that telmisartan is effective in reducing arterial stiffness in hypertensive patients with Type 2 diabetes mellitus, and may potentially have beneficial effects on cardiovascular outcomes, beyond blood-pressure lowering effects, in this patient group.

144701-48-4, Telmisartan

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(telmisartan effect on arterial distensibility and central blood pressure in patients with hypertension and type 2 diabetes

mellitus)

REFERENCE COUNT:

THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS 13 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: DOCUMENT NUMBER:

2001:759575 HCAPLUS

135:298797

TITLE:

Synergistic effect of a sulfonylurea and/or non-sulfonylurea K+ ATP channel blocker, and a

phosphodiesterase 3 type inhibitor for the treatment of non-insulin-dependent diabetes or other conditions

Fryburg, David Albert; Parker, Janice Catherine INVENTOR(S): PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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KIND DATE
     PATENT NO.
                                          APPLICATION NO. DATE
                      ____
                           -----
                                          -----
     EP 1145717
                                        EP 2001-303020 20010330
                     A2
                           20011017
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     US 2002013268
                            20020131
                                          US 2001-829874
                                                           20010410
                     A1
     BR 2001001461
                      Α
                            20011113
                                          BR 2001-1461
                                                           20010411
     JP 2001354568
                                          JP 2001-115674
                                                           20010413
                      Α2
                            20011225
PRIORITY APPLN. INFO.:
                                       US 2000-196728P P 20000413
    The invention provides the use of a synergistic amt. of (1) a
     sulfonylurea, a non-sulfonylurea K+ ATP channel blocker, or a sulfonylurea
     and a non-sulfonylurea K+ ATP channel blocker; and (2) a cAMP
    phosphodiesterase type 3 inhibitor; for the manuf. of medicaments for
    treating or preventing non-insulin-dependent diabetes mellitus, insulin
    resistance, Syndrome X, diabetic neuropathy, diabetic nephropathy,
    diabetic retinopathy, diabetic cardiomyopathy, polycystic ovary syndrome,
    cataracts, hyperglycemia, or impaired glucose tolerance. The invention
    also provides kits and pharmaceutical compns. that comprise (1) a
     sulfonylurea, a non-sulfonylurea K+ ATP channel blocker, or a sulfonylurea
    and a non-sulfonylurea K+ ATP channel blocker: and (2) a cAMP
    phosphodiesterase type 3 inhibitor. The invention further provides kits
    and pharmaceutical compns. that comprise (1) a sulfonylurea, a
    non-sulfonylurea K+ ATP channel blocker, or a sulfonylurea and a
    non-sulfonylurea K+ ATP channel blocker: (2) a cAMP phosphodiesterase type
     3 inhibitor; and (3) an addnl. compd. useful for the treatment of
    non-insulin-dependent diabetes mellitus, insulin resistance, Syndrome X,
    diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, diabetic
     cardiomyopathy, polycystic ovary syndrome, cataracts, hyperglycemia, or
     impaired glucose tolerance.
    73384-60-8
ΙT
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (sulfonylurea and/or non-sulfonylurea K+ ATP channel blocker and
       phosphodiesterase 3 type inhibitor synergism for treatment of
       non-insulin-dependent diabetes or other conditions)
    ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER:
                        2001:376495 HCAPLUS
DOCUMENT NUMBER:
                         135:236137
TITLE:
                        The role of angiotensin II receptor antagonists in the
                        management of diabetes
AUTHOR(S):
                        Barnett, Anthony H.
CORPORATE SOURCE:
                        Birmingham Heartlands Hospital, Birmingham, UK
```

LANGUAGE:

English

Diabetic nephropathy, which develops in about 30% of patients with diabetes, is a progressive condition. It is characterized by increased blood pressure, declining glomerular filtration rate and albuminuria. Lowering of blood pressure in diabetic patients is assocd. with reduced cardiovascular risk and renal protection. Inhibitors of angiotensin-converting enzyme (ACE) are the current gold std. treatment for hypertension in patients with type I diabetes because, in addn. to their blood pressure lowering ability, they are thought to oppose the increased intraglomerular pressure that is mediated in part by angiotensin II. The angiotensin II receptor antagonists, a more recently developed

CODEN: BPSUEY; ISSN: 0803-8023

Taylor & Francis

Journal

Blood Pressure, Supplement (2001), (1), 21-26

SOURCE:

PUBLISHER:

DOCUMENT TYPE:

class of antihypertensive agents, appear to be as effective as ACE inhibitors in delaying the progression of renal injury in animal models of diabetes. They act by selectively blocking the binding of angiotensin II to the AT1 receptor and may, therefore, offer a more complete blockade of the renin-angiotensin system than ACE inhibitors. The renal and antihypertensive effects of this class of drug in patients with diabetes are now being investigated in long-term clin. trials. The multicenter Diabetics Exposed to Telmisartan And EnalaprIL (DETAIL) study is a randomized, double-blind, parallel-group comparison of the renal and antihypertensive effects of the angiotensin II receptor antagonist telmisartan and the ACE inhibitor enalapril in 272 patients with type II diabetes. The primary outcome is change in glomerular filtration rate over the 5 yr of the study.

IT 144701-48-4, Telmisartan

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(role of angiotensin II receptor antagonists in management of diabetes)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:306863 HCAPLUS

DOCUMENT NUMBER: 135:251642

TITLE: Comparative antihypertensive and renoprotective

effects of telmisartan and lisinopril after long-term

treatment in hypertensive diabetic rats

AUTHOR(S): Wienen, Wolfgang; Richard, Serge; Champeroux, Pascal;

Audeval-Gerard, Chantal

CORPORATE SOURCE: Department of Pharma Research, Boehringer Ingelheim

Pharma KG, Biberach, Germany JRAAS (2001), 2(1), 31-36

CODEN: JRAAAG; ISSN: 1470-3203

PUBLISHER: JRAAS Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

SOURCE:

This study compared the cardiovascular and renal effects of long-term telmisartan (3 and 10 mg/kg/day) and lisinopril (10 mg/kg/day) in an animal model combining hypertension and diabetes mellitus. It was a parallel-group study of diabetic, spontaneously hypertensive rats (SHR), treated with control or active treatment for eight months. A non-diabetic SHR control group was run in parallel. Diabetes was induced by streptozotocin (45 mg/kg i.v.) in SHRs aged 9-10 wk. Animals were treated with telmisartan (3 or 10 mg/kg/day), lisinopril (10 mg/kg/day) or Plasma glucose levels, blood pressure (BP), and urinary protein and albumin excretion were measured monthly. Telmisartan treatment significantly reduced BP of diabetic SHRs in a dose-dependent manner (p<0.05, low-dose, n=18; p<0.01, high-dose, n=15). The BP redn. in the lisinopril group was similar to that in the telmisartan 10 mg/kg/day group. Compared with non-diabetic SHRs, untreated diabetic SHRs developed severe proteinuria and albuminuria over the exptl. period (p<0.01). diabetic SHRs, proteinuria and albuminuria were dose-dependently and significantly attenuated by treatment with telmisartan (p<0.01 with the higher dose) and lisinopril (p<0.01). Compared with the untreated diabetic SHRs, cardiac hypertrophy was significantly reduced after treatment with both doses of telmisartan and with lisinopril. Telmisartan, 10 mg/kg/day, but not lisinopril, significantly attenuated the diabetes-induced increase in glomerular vol. In conclusion,

telmisartan, 10 mg/kg/day, is at least as beneficial as lisinopril, 10 mg/kg/day, in lowering BP, reducing cardiac hypertrophy and attenuating renal excretion of protein and albumin in this model.

IT **144701-48-4**, Telmisartan

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comparative antihypertensive, renoprotective, and cardioprotective effects of telmisartan and lisinopril after long-term treatment in hypertensive diabetic rats)

REFERENCE COUNT:

THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:167787 HCAPLUS

DOCUMENT NUMBER:

134:202715

TITLE:

Pharmaceutical formulations of ACE and ATII inhibitors

for prevention of stroke, diabetes and/or congestive

heart failure

INVENTOR(S):

Schoelkens, Bernward; Bender, Norbert; Rangoonwala,

Badrudin; Dagenais, Gilles; Gerstein, Hertzel;

Ljunggren, Anders; Yusuf, Salim

PATENT ASSIGNEE(S):

Aventis Pharma Deutschland G.m.b.H., Germany

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE: Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE WO 2001015673 A2 20010308 WO 2000-EP8341 20000825 WO 2001015673 A3 20020307 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG SE 1999-3028 PRIORITY APPLN. INFO.: The present invention relates to use of an inhibitor of the

renin-angiotensin system (RAS), i.e., inhibitors of angiotensin-converting enzyme (ACE) and angiotensin II type 1 receptor (ATII) antagonists or a pharmaceutically acceptable deriv. thereof, particularly ramipril or ramiprilat, in the manuf. of a medicament for the prevention and/or treatment of stroke, diabetes and/or congestive heart failure (CHF). A large-scale clin. trial was designed to examine the effect of the ACE inhibitor ramipril vs. placebo in reducing cardiovascular events. There was a clear 32% redn. in the ramipril group in the no. of patients who developed a stroke, and this is surprising since patients were normotensive when recruited to the study. The no. of patients who developed CHF was significantly reduced by 21% in the ramipril group, which is unexpected since patients had no signs or symptoms of CHF at study start. Equally surprising is the marked 36% redn. in the no. of patients who developed diabetes in the ramipril group.

# IT 144701-48-4, Telmisartan

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. of inhibitors of renin-angiotensin system for prevention and/or treatment of stroke, diabetes and/or congestive heart failure)

L6 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:

2001:31502 HCAPLUS

DOCUMENT NUMBER:

134:100881

TITLE:

Preparation of fused imidazole compounds and remedies

for diabetes mellitus

INVENTOR(S):

Asano, Osamu; Harada, Hitoshi; Yoshikawa, Seiji; Watanabe, Nobuhisa; Inoue, Takashi; Horizoe, Tatsuo; Yasuda, Nobuyuki; Oohashi, Kaya; Minami, Hiroe; Nagaoka, Junsaku; Murakami, Manabu; Kobayashi, Seiichi; Tanaka, Isao; Kawata, Tsutomu; Shimomura, Naoyuki; Akamatsu, Hirofumi; Ozeki, Naoki; Shimizu,

Toshikazu; Hayashi, Kenji; Haga, Toyokazu; Negi,

Shigeto; Naito, Toshihiko

PATENT ASSIGNEE(S):

Eisai Co., Ltd., Japan PCT Int. Appl., 130 pp.

CODEN: PIXXD2

SOURCE:
DOCUMENT TYPE:

Patent Japanese

LANGUAGE:

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	<b>-</b>			
WO 2001002400	A1	20010111	WO 2000-JP4358	20000630
M· All BB	CA CN	ин тт. тр	KR MY NO NZ RII	11S 7.A

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE

PRIORITY APPLN. INFO.:

JP 1999-188484 A 19990702 JP 2000-143495 A 20000516 JP 2000-182786 A 20000619

OTHER SOURCE(S):

MARPAT 134:100881

GI

$$R^{2}$$
 $Q$ 
 $N$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 

AB Novel fused imidazole compds. such as purine derivs. of general formula (I), pharmacol. acceptable salts thereof, or hydrates of both [wherein R1 = H, OH, halo, (un)substituted C1-8 alkyl, (un)substituted NH2; R2 = H, halo, (un)substituted NH2, (un)substituted C2-8 alkenyl, (un)substituted C3-8 alkynyl, (un)substituted C1-8 alkyl; R3 = (un)substituted C3-8 alkynyl, C3-8 alkenyl, (un)substituted C1-8 alkyl, (un)substituted aryl,

```
(un) substituted heteroaryl, etc.; Ar = (un) substituted aryl,
     (un) substituted heteroaryl, optionally halo- or C1-6 alkyl-substituted
     N-C1-6 alkyl- or N-C3-6 cycloalkyl-oxopyridyl or -oxopyrimidyl; Q, W = N,
     CH; some proviso are given] are prepd. These compds. exhibit adenosine A2
     receptor antagonism and are effective in the prevention and treatment of
     diabetes mellitus and complications of diabetes. Thus,
     5-[6-amino-8-(3-fluorophenyl)-9H-purin-9-yl]-1,2-dihydro-2-pyridinone was
     condensed with N,N-dimethylformamide di-Me acetal in DMF at room temp. for
     1 h, ice-cooled, treated with NaH at 0-6.degree. for 30 min, and
     methylated by Me iodide at room temp. for 16 h to give
     5-[6-amino-8-(3-fluorophenyl)-9H-purin-9-yl]-1-methyl-1,2-dihydro-2-
     pyridinone (II). II.HCl at 10 mg/kg p.o. in spontaneously diabetic mice
     lowered the blood sugar level to 47.3.+-.7.2% of the control animal.
     318468-06-3P 318468-10-9P 318468-11-0P
ΙT
     318468-12-1P 318468-13-2P 318468-14-3P
     318468-15-4P 318468-16-5P 318468-17-6P
     318468-21-2P 318468-25-6P 318468-28-9P
     318468-29-0P 318468-30-3P 318468-31-4P
     318468-41-6P 318468-42-7P 318468-43-8P
     318468-44-9P 318468-46-1P 318468-47-2P
     318468-48-3P 318468-49-4P 318468-50-7P
     318468-51-8P 318468-52-9P 318468-53-0P
     318468-56-3P 318468-57-4P 318468-58-5P
     318468-59-6P 318468-60-9P 318468-61-0P
     318468-62-1P 318468-63-2P 318468-64-3P
     318468-65-4P 318468-69-8P 318468-70-1P
     318468-71-2P 318468-72-3P 318468-78-9P
     318468-83-6P 318468-84-7P 318468-85-8P
     318468-86-9P 318468-87-0P 318468-88-1P
     318468-95-0P 318468-98-3P 318469-02-2P
     318469-03-3P 318469-04-4P 318469-07-7P
     318469-08-8P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of fused imidazole compds. as antagonists of adenosine A2
        receptors and remedies for diabetes mellitus)
ΙT
     318468-40-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (prepn. of fused imidazole compds. as antagonists of adenosine A2
        receptors and remedies for diabetes mellitus)
IT
     318468-09-6P 318468-19-8P 318468-20-1P
     318468-26-7P 318468-54-1P 318468-68-7P
     318468-76-7P 318468-82-5P 318468-92-7P
     318468-93-8P 318468-94-9P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (prepn. of fused imidazole compds. as antagonists of adenosine A2
        receptors and remedies for diabetes mellitus)
REFERENCE COUNT:
                         26
                               THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2002 ACS
L6
                         2000:911225 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
                         134:71593
TITLE:
                         Preparation of imidazoline derivatives for the
                         treatment of diabetes, especially type II diabetes
INVENTOR(S):
                         Paal, Michael; Ruehter, Gerd; Schotten, Theo
PATENT ASSIGNEE(S):
                         Eli Lilly and Company, USA
```

SOURCE:

PCT Int. Appl., 143 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

	PATENT NO.  WO 2000078726								APPLICATION NO. DATE WO 2000-US11881 20000619									
		W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CR,
			CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	ΗU,
			ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	ΚP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,
			LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,
			SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	ΤZ,	UA,	UG,	US,	UZ,	VN,	YU,
			ZA,	ZW,	AM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	TM					
		RW:	GH,	GM,	ΚE,	LS,	MW,	ΜZ,	SD,	SL,	SZ,	ΤZ,	UG,	ZW,	AT,	BE,	CH,	CY,
			DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	ΙΤ,	LU,	MC,	NL;	PT,	SE,	BF,	ВJ,
			CF,	CG,	CI,	CM,	GΑ,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	TG			
	GB	2351	081		Α	1	2000	1220		G!	B 19	99-1	4222		1999	0618		
PRIO	RITY	APP	LN.	INFO	. :				(	GB 1	999-	1422	2	Α	1999	0618		
OTHE	R SC	DURCE	(S):			MAR	PAT	134:	7159	3								
GΙ																		

The title compds. [I; R1-R4 = H, alkyl; R1 and R3, together with the carbon atoms to which they are attached, combine to form a C3-7 carbocyclic ring and R2 and R4 = H, alkyl; R1 and R2, together with the carbon atom to which they are attached combine to form a C3-7 spirocarbocyclic ring and R3 and R4 = H, alkyl; R3 and R4, together with the carbon atom to which they are attached combine to form a C3-7 spirocarbocyclic ring and R1 and R2 = H, alkyl; R5 = H, alkyl, aryl, etc.; R6 = H, alkyl, alkoxy, etc.; R7 = H, alkyl, alkoxy, etc.; Y = NHCONH, NHCO, a bond, etc.; A = a monocyclic or bicyclic ring; R8 = H, alkyl, alkenyl, etc.; R9, R10 = H, alkyl, alkoxy, etc.], useful for the treatment of diabetes, diabetic complications, metabolic disorders, or related diseases where impaired glucose disposal is present (no data), were prepd. and formulated. E.g., a multi-step synthesis of the imidazoline II.HCl was given. The compds. I are effective at 0.1-5 mg/kg/day.

#### IT 314240-70-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of imidazoline derivs. as antidiabetics)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:456867 HCAPLUS

DOCUMENT NUMBER: 133:84284

TITLE: A combination of fructose-1,6-bisphosphatase (FBPase)

inhibitors and insulin sensitizers for the treatment

ADDITCAMION NO

of diabetes

INVENTOR(S): Erion, Mark D.; Vanpoelje, Paul PATENT ASSIGNEE(S): Metabasis Therapeutics, Inc., USA

KIND DAME

SOURCE: PCT Int. Appl., 306 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

LANGUAGE: Engli FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PA'	LENL	NO.		K1	ND	DATE			Α	55PT	CATI	N NC	0.	DATE			
		2000								W	0 19	99 <b>-</b> U	s307	13	1999	1222		
	WO	2000					2001											
		W:	ΑE,	AL,	ΑM,	ΑT,	ΑU,	ΑZ,	ΒA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CU,	CZ,
			DE,	DK,	EE,	ES,	FΙ,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,
			JP,	KE,	KG,	KΡ,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MD,	MG,	MK,
			MN,	MW,	MX,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ТJ,
															BY,			
			RU,	ТJ,	TM													
		RW:	GH,	GM,	ΚE,	LS,	MW,	SD,	SL,	SZ,	TZ,	UG,	ZW,	ΑT,	BE,	CH,	CY,	DE,
															SE,			
			CG,	CI,	CM,	GA,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	TG				
	EΡ	1143	955		A.	2	2001	1017		Ε	P 19	99-9	6431	3	1999	1222		
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
			ΙE,	ΓI														
	BR	9917	005		A		2002	0402		В	R 19	99-1	7005		1999	1222		
	NO	2001	0031	15	A		2001	0824		N	0 20	01-3	115		2001	0621		
PRIO	RIT	Y APP	LN.	INFO	. :				1	US 1	998-	1147	18P	P	1998	1224		
									1	WO 1	999-	US30	713	W	1999	1222		
OMITT	n a	SUDOD	101			N 4 70 TO	D T CO	122.	2420	4								

OTHER SOURCE(S): MARPAT 133:84284

AB Pharmaceutical compns. contg. an FBPase inhibitor and an insulin sensitizer are provided as well as methods for treating diabetes and diseases responding to increased glycemic control, an improvement in insulin sensitivity, a redn. in insulin levels, or an enhancement of insulin secretion.

IT 213247-37-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(fructose-1,6-bisphosphatase inhibitor-insulin sensitizer combination for **diabetes** treatment, and inhibitor prepn.)

L6 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:451298 HCAPLUS

DOCUMENT NUMBER: 131:116251

TITLE: Preparation of purine derivatives as adenosine A2

receptor antagonists for the treatment of diabetes Asano, Osamu; Harada, Hitoshi; Hoshino, Yorihisa; INVENTOR(S):

Yoshikawa, Seiji; Inoue, Takashi; Hoshino, Yorihisa; Yoshikawa, Seiji; Inoue, Takashi; Horizoe, Tatsuo; Yasuda, Nobuyuki; Nagata, Kaya; Nagaoka, Junsaku; Murakami, Manabu; Kobayashi, Seiichi Eisai Co., Ltd., Japan PCT Int. Appl., 167 pp.

PATENT ASSIGNEE(S): SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	TENT	NO.		KII	ND	DATE			A.	PPLI	CATI	ON N	Э.	DATE			
WO	9935	147		A.	1	1999	0715		M	O 19	98-J	P587	0	1998	1224		
	W:	ΑU,	BR,	CA,	CN,	HU,	KR,	MX,	NO,	NZ,	RU,	US					
	RW:	ΑT,	BE,	CH,	CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	IE,	IT,	LU,	MC,	NL,
		PT,															,
JP	1126	3789		A2	2	1999	0928		J	P 19	98-3	6393	8	1998	1222		
CA	2315	736		A.	Ą	1999	0715		C	A 19	98-2	3157	36	1998	1224		
ΑU	9916	885		A.	1	1999	0726		Αl	J 19	99-1	6885		1998	1224		
ΕP	1054	012		A:	1	2000	1122		E	P 19	98-9	6152	3	1998	1224		
	R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙT,	LI,	LU,	NL,	SE,	MC,	PT,
		TE.	FT														

PRIORITY APPLN. INFO.:

JP 1998-526 A 19980105

WO 1998-JP5870 W 19981224

OTHER SOURCE(S):

MARPAT 131:116251

GΙ

$$\begin{array}{c|c}
R^2 \\
N & N \\
N & N \\
R^3 \\
R^4 & I
\end{array}$$

$$C \equiv C$$

$$N$$

$$N$$

$$N$$

$$N$$

$$Et$$

$$Et$$

$$F$$

$$II$$

AΒ The title compds. I [R1 = (un) substituted arom. ring (which may contain heteroatom), etc.; W = CH2CH2, etc.; R2 = H, (un)substituted alkyl, etc.;

R3 = H, (un)substituted cycloalkyl, etc.; R4 = H, (un)substituted alkyl, heteroaryl, etc.; a proviso is given] are prepd. In an in vitro test for A2a receptor antagonism, the title compd. II showed the Ki value of 0.002.mu.M.

# IT 232255-09-3P 232255-10-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. of purine derivs. as adenosine A2 receptor antagonists for treatment of diabetes)

#### IT 232255-07-1 232255-08-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of purine derivs. as adenosine A2 receptor antagonists for treatment of **diabetes**)

IT 232254-90-9P 232254-91-0P 232254-93-2P

232254-94-3P 232254-96-5P 232254-97-6P

232254-99-8P 232255-00-4P 232255-01-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of purine derivs. as adenosine A2 receptor antagonists for treatment of diabetes)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 1999:216939 HCAPLUS

DOCUMENT NUMBER. 1393.210333

DOCUMENT NUMBER: 130:247048

TITLE: Composition for treating diabetes mellitus and obesity

INVENTOR(S): Forssmann, Wolf Georg; Richter, Rudolf; Adermann,

Knut; Meyer, Markus

PATENT ASSIGNEE(S): Germany

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PAS	TENT NO.	KIND	DATE	APPLICATION NO. DATE
WO	9914239 W: JP, US	A1	19990325	WO 1998-EP5804 19980911
		CH, CY	, DE, DK,	ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
	19810515	A1 A1		DE 1998-19810515 19980311 EP 1998-950026 19980911
,	R: AT, BE,	CH, DE		GB, IT, LI, NL
PRIORITY	Y APPLN. INFO	).:		DE 1997-19740081 A 19970912 DE 1997-19757739 A 19971223
				DE 1998-19810515 A 19980311 WO 1998-EP5804 W 19980911

AB A combination of .gtoreq.2 of (a) .gtoreq.1 hormone which stimulates cAMP prodn., (b) .gtoreq.1 substance which inhibits the breakdown of a cyclic nucleotide, and (c) .gtoreq.1 hormone which stimulates cGMP prodn. is superior to any of these substances alone in stimulating insulin secretion and decreasing the blood glucose level. Component (a) is an analog or deriv. of glucagon-like peptide 1, (b) is a phosphodiesterase inhibitor, and (c) is a guanylate cyclase C-activating peptide, esp. a guanylin or

uroguanylin fragment. These may be combined with addnl. peptide hormones which affect islet cell secretion (no data).

IT **73384-60-8**, Sulmazole

CORPORATE SOURCE:

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(peptide compn. for treating diabetes mellitus and obesity)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:738236 HCAPLUS DOCUMENT NUMBER: 128:21399

TITLE: Angiotensin blockade improves cardiac and renal

complications of type II diabetic rats

AUTHOR(S): Kim, Shokei; Wanibuchi, Hideki; Hamaguchi, Akinori;

Miura, Katsuyuki; Yamanaka, Shinya; Iwao, Hiroshi Department of Pharmacology, Osaka City University

Medical School, Osaka, 545, Japan

SOURCE: Hypertension (Dallas) (1997), 30(5), 1054-1061

CODEN: HPRTDN; ISSN: 0194-911X

PUBLISHER: American Heart Association

DOCUMENT TYPE: Journal LANGUAGE: English

Using Otsuka Long-Evans Tokushima Fatty (OLETF) rats, a new model of human non-insulin-dependent diabetes mellitus (NIDDM), the authors examd. the role of local angiotensin II in cardiovascular and renal complications of OLETF rats were orally given cilazapril (an angiotensin-converting enzyme inhibitor, 1 or 10 mg/kg), E4177 (an angiotensin AT1 receptor antagonist, 10 mg/kg), or vehicle for 26 or 40 wk (from the age of 20 to 46 or 60 wk). Cardiac mRNAs were measured by Northern blot anal., and the thickening of the coronary arterial wall and the degree of perivascular fibrosis were detd. by an image analyzer. Cilazapril or E4177 did not significantly affect body wt. or plasma glucose and insulin levels of OLETF rats, indicating the minor effects on diabetes itself. However, both drugs significantly and similarly prevented coronary microvascular remodeling (the increase in wall thickening and perivascular fibrosis in coronary arterioles and small coronary arteries) in OLETF rats, and they were assocd. with the suppression of cardiac transforming growth factor-.beta.1 expression. Both drugs suppressed not only the increase in left ventricular wt. but also the downregulation of cardiac .alpha.-myosin heavy chain expression in OLETF rats. Glomerulosclerosis and glomerular hypertrophy in OLETF rats were improved by cilazapril and E4177 to a comparable extent. These results, taken together with the fact that OLETF rats show normal plasma renin levels, support that the AT1 receptor is involved in the pathogenesis of cardiac and renal complications in NIDDM.

IT 135070-05-2

INVENTOR(S):

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (angiotensin blockade improves cardiac and renal complications of type II diabetic rats)

L6 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 1994:245099 HCAPLUS

DOCUMENT NUMBER: 120:245099

TITLE: Benzimidazole derivatives and analogs with

antidiabetic and platelet antiaggregant activity, and

their preparation and pharmaceutical compositions Anisimova, Vera Alekseevna; Levchenko, Margarita

Valentinovna; Korochina, Tatyana Borisovna; Spasov,

Alexander Alexeyevich; Kovalev, Sergei Gennadyevich;

1

Dudchenko, Galina Petrovna

PATENT ASSIGNEE(S):

Adir et Cie., Fr.

SOURCE:

Eur. Pat. Appl., 66 pp. CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

French

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE EP 571253 A1 19931124 EP 1993-401239 19930514 EP 571253 В1 19981104 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE FR 2691462 Α1 19931126 FR 1992-6036 19920519 FR 2691462 В1 19950609 FR 1992-9488 FR 2694293 Α1 19940204 19920731 FR 2694293 В1 19941007 AT 172975 AT 1993-401239 19930514  $\mathbf{E}$ 19981115 ES 2126636 Т3 19990401 ES 1993-401239 19930514 CA 1993-2096475 CA 2096475 AA19931120 19930518 19930518 AU 9338608 Α1 19931125 AU 1993-38608 AU 656466 В2 19950202 JP 06087859 A2 JP 1993-151016 19930518 19940329 JP 2506263 В2 19960612 US 5623073 19970422 US 1993-63531 19930518 Α ZA 9303509 19931210 ZA 1993-3509 19930519 Α US 5639756 Α 19970617 US 1994-330903 19941028

FR 1992-6036

FR 1992-9488

19920519

19920731

OTHER SOURCE(S):

PRIORITY APPLN. INFO.:

MARPAT 120:245099

GΙ

Members of claimed title compds. I [n = 0, 1; A, B, C, D = H, halo, alkyl,AΒ alkoxy, OH, CF3, hydroxyalkyl; Y, Z = H; or YZ = bond; XR1 or XR2 = bond, and other group (R1 or R2) = (un)substituted aminoalkyl, aroylalkyl, arylhydroxyalkyl, phenylalkyl, naphthylalkyl; R3 = H, alkyl, (un) substituted Ph, naphthyl, heteroaryl; R4 = H, (un) substituted aminoalkyl, aminoalkoxycarbonyl, aroyl, heteroaroyl; with many addnl. dependencies and provisos] were prepd. in 71 synthetic examples, mostly as salts, with the corresponding specific free bases also claimed. example, 2-amino-1-[2-(diethylamino)ethyl]benzimidazole underwent N-alkylation at the 3-position by ClCH2CH2OH (90% yield), and treatment of the resulting alc. with SOC12 gave the chloroethyl imine 1-[2-(diethylamino)ethyl]-2-imino-3-(2-chloroethyl)benzimidazole-2HCl (100%). Cyclization of the latter as the free base in xylene (92%) gave

title compd. II, isolated as the di-HCl salt. Tests in rats showed I to have hypoglycemic activity comparable to gliclazide, lasting more than 12 h. I showed ID50 of < 10-4 M for inhibition of ADP-induced aggregation of rabbit platelets in vitro, but showed no significant antihypertensive effects in rats. Acute oral toxicity in mice was also said to be very low.

#### 154054-52-1P 154055-18-2P IΤ

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as antidiabetic and platelet antiaggregant)

ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:

1979:496629 HCAPLUS

DOCUMENT NUMBER:

91:96629

TITLE:

Pharmaceutical composition containing a

2-phenylbenzimidazole derivative

PATENT ASSIGNEE(S):

Sandoz A.-G., Switz.

SOURCE:

Belg., 10 pp.

DOCUMENT TYPE:

CODEN: BEXXAL Patent

LANGUAGE:

French

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 871473	A1	19790423	BE 1978-191297	19781023

GI

AB A compn. for treating of obesity contains I [724-59-4]. Thus, tablets were prepd. from I 100, poly(vinylpyrrolidone) 10, lactose 247.5, corn starch 25, talc 15, and Mg stearate 2.5 mg. I at 108 mg/kg orally caused 25% inhibition in the rise of blood sugar level of fasted rats given 2g maltose or 200 mg starch/kg.

724-59-4 IT

RL: PRP (Properties)

(antiobesity and antidiabetic effect of)

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=> fil reg

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Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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(FILE 'HCAPLUS' ENTERED AT 20:45:04 ON 26 APR 2002) SELECT HIT RN L6 1-15

FILE 'REGISTRY' ENTERED AT 20:46:13 ON 26 APR 2002 L8 94 S E1-E94

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17
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                             REGISTRY
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                  73384-60-8
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DR
     134250-42-3, 112363-11-8
93
                  57260-68-1
                               REGISTRY
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94 RN **724-59-4** REGISTRY

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L8 ANSWER 1 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **400785-22-0** REGISTRY

CN 2-Pyrimidinemethanol, 4-[4-(1-ethyl-1H-benzimidazol-2-yl)-1-piperazinyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H22 N6 O

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:200160

L8 ANSWER 5 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 318469-08-8 REGISTRY

CN 2(1H)-Pyridinone, 5-[2-(3-fluorophenyl)-3H-imidazo[4,5-b]pyridin-3-yl]-1-methyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H13 F N4 O

SR CA

LC STN Files: CA, CAPLUS

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:100881

L8 ANSWER 10 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **318468-98-3** REGISTRY

CN 9H-Purin-6-amine, 9-(6-methoxy-3-pyridinyl)-8-(2-pyridinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C16 H13 N7 O

SR CA

LC STN Files: CA, CAPLUS

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:100881

L8 ANSWER 72 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **314240-70-5** REGISTRY

CN 1H-Benzimidazol-4-ol, 2-[4-(4,5-dihydro-1H-imidazol-2-yl)phenyl]-, monohydrochloride (9CI) (CA INDEX NAME)

MF C16 H14 N4 O . C1 H

SR CA

LC STN Files: CA, CAPLUS

● HCl

1 REFERENCES IN FILE CA (1967 TO DATE)

# 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:71593

L8 ANSWER 73 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **232255-10-6** REGISTRY

CN 3H-Imidazo[4,5-b] pyridine, 2-(3-fluorophenyl)-3-(4-pyridinyl)-(9CI) (CA)

INDEX NAME)
FS 3D CONCORD

FS 3D CONCORD MF C17 H11 F N4

MF CI/HII

CI COM SR CA

LC STN Files: CA, CAPLUS

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:116251

L8 ANSWER 79 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 232254-99-8 REGISTRY

CN 9H-Purine, 8-(3-fluorophenyl)-2-iodo-9-methyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C12 H8 F I N4

SR CA

LC STN Files: CA, CAPLUS

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:116251

L8 ANSWER 86 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 213247-37-1 REGISTRY

CN Phosphonic acid, [5-[6-amino-9-(2,2-dimethylpropyl)-9H-purin-8-yl]-2-furanyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C14 H18 N5 O4 P

CI COM

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1967 TO DATE)

5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:123595

REFERENCE 2: 135:348869

REFERENCE 3: 133:84284

REFERENCE 4: 131:185194

REFERENCE 5: 129:260281

L8 ANSWER 87 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **154055-18-2** REGISTRY

CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-(1-methyl-1H-benzimidazol-2-yl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C23 H26 N6

CI COM

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 120:245099

L8 ANSWER 88 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **154054-52-1** REGISTRY

CN 9H-Imidazo[1,2-a]benzimidazole-9-ethanamine, N,N-diethyl-2-(1-methyl-1H-benzimidazol-2-yl)-, dihydrobromide (9CI) (CA INDEX NAME)

MF C23 H26 N6 . 2 Br H

SR CA

LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL

CRN (154055-18-2)

#### •2 HBr

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 120:245099

L8 ANSWER 89 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **145909-56-4** REGISTRY

CN 1H-Benzimidazole, 1-ethyl-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C13 H18 N4

CI COM

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1967 TO DATE)

5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:200160

REFERENCE 2: 135:92650

REFERENCE 3: 128:290174

REFERENCE 4: 126:69743

REFERENCE 5: 118:101955

# => d ide can 18 90 91 92 93 94

L8 ANSWER 90. OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 144701-48-4 REGISTRY

CN [1,1'-Biphenyl]-2-carboxylic acid, 4'-[(1,4'-dimethyl-2'-propyl[2,6'-bi-1H-benzimidazol]-1'-yl)methyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 4'-[[4-Methyl-6-(1-methyl-2-benzimidazolyl)-2-propyl-1-benzimidazolyl]methyl]-2-biphenylcarboxylic acid

CN BIBR 277

CN BIBR 277SE

CN Telmisartan

FS 3D CONCORD

MF C33 H30 N4 O2

SR CA

LC STN Files: ADISINSIGHT, ADISNEWS, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CBNB, CHEMINFORMRX, CIN, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, MRCK\*, PHAR, PROMT, SYNTHLINE, TOXCENTER, USAN, USPATFULL

(\*File contains numerically searchable property data)
Other Sources: WHO

## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

119 REFERENCES IN FILE CA (1967 TO DATE)

119 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:272916

REFERENCE 2: 136:252567

REFERENCE 3: 136:226254

REFERENCE 4: 136:205430

REFERENCE 5: 136:194252

REFERENCE 6: 136:194251

REFERENCE 7: 136:177691

REFERENCE 8: 136:112467

REFERENCE 9: 136:112466

REFERENCE 10: 136:112440

L8 ANSWER 91 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 135070-05-2 REGISTRY

CN [1,1'-Biphenyl]-2-carboxylic acid, 4'-[(2-cyclopropyl-7-methyl-3H-imidazo[4,5-b]pyridin-3-yl)methyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3H-Imidazo[4,5-b]pyridine, [1,1'-biphenyl]-2-carboxylic acid deriv. OTHER NAMES:

CN 57G709

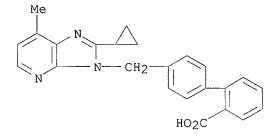
CN E 1477

CN E 4177

MF C24 H21 N3 O2

SR CA

LC STN Files: ADISINSIGHT, ANABSTR, BIOSIS, CA, CAPLUS, DRUGNL, DRUGUPDATES, EMBASE, MEDLINE, PHAR, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

38 REFERENCES IN FILE CA (1967 TO DATE)

38 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:308910

REFERENCE 2: 135:308909

REFERENCE 3: 133:140268

133:129687 REFERENCE 4: REFERENCE 5: 133:79362 REFERENCE 133:68961 6: 7: 132:175862 REFERENCE REFERENCE 8: 132:102609 REFERENCE 9: 132:102605 10: 132:31209 REFERENCE L8ANSWER 92 OF 94 REGISTRY COPYRIGHT 2002 ACS **73384-60-8** REGISTRY RN CN 1H-Imidazo[4,5-b]pyridine, 2-[2-methoxy-4-(methylsulfinyl)phenyl]- (9CI) (CA INDEX NAME) OTHER NAMES: CN AR-L 115 CN AR-L 115BS Sulmazole CN Vardax CN 3D CONCORD FS DR 134250-42-3, 112363-11-8 MF C14 H13 N3 O2 S CI LC ADISINSIGHT, ADISNEWS, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IPA, MEDLINE, MRCK\*, PHAR, PROMT, RTECS\*, TOXCENTER, USAN, USPATFULL (\*File contains numerically searchable property data) EINECS\*\*, WHO Other Sources: (\*\*Enter CHEMLIST File for up-to-date regulatory information)

#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

151 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
151 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:241690
REFERENCE 2: 135:298797
REFERENCE 3: 132:216756

REFERENCE 4: 131:111456 REFERENCE 5: 130:321224 REFERENCE 6: 130:247048 REFERENCE 7: 128:303859 REFERENCE 8: 128:239908 REFERENCE 9: 128:136100 REFERENCE 10: 127:130729

L8 ANSWER 93 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN **57260-68-1** REGISTRY

CN 1H-Benzimidazole, 2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1-(2-Benzimidazoly1)piperazine CN 2-Piperazin-1-yl-1H-benzimidazole

FS 3D CONCORD

MF C11 H14 N4

CI COM

LC STN Files: BEILSTEIN\*, CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL (\*File contains numerically searchable property data)

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

10 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

10 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:200479

REFERENCE 2: 136:200160

REFERENCE 3: 136:31701

REFERENCE 4: 135:366316

REFERENCE 5: 134:311197

REFERENCE 6: 133:252456

REFERENCE 7: 133:252420

REFERENCE 8: 128:290174

REFERENCE 9: 126:69743

REFERENCE 10: 83:201749

L8 ANSWER 94 OF 94 REGISTRY COPYRIGHT 2002 ACS

RN 724-59-4 REGISTRY

CN 1H-Benzimidazole, 2-(4-fluorophenyl)-1-methyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzimidazole, 2-(p-fluorophenyl)-1-methyl- (7CI, 8CI)

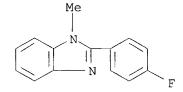
OTHER NAMES:

CN 1-Methyl-2-(p-fluorophenyl)benzimidazole

FS 3D CONCORD

MF C14 H11 F N2

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CHEMCATS, USPATFULL (\*File contains numerically searchable property data)



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

6 REFERENCES IN FILE CA (1967 TO DATE)

6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 125:57829

REFERENCE 2: 108:168981

REFERENCE 3: 94:71484

REFERENCE 4: 93:173761

REFERENCE 5: 91:96629

REFERENCE 6: 91:9500

=> fil hcaplus

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FILE COVERS 1907 - 26 Apr 2002 VOL 136 ISS 18 FILE LAST UPDATED: 25 Apr 2002 (20020425/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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L2
L3
                STR
L4
          20432 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L5
           9122 SEA FILE=HCAPLUS ABB=ON PLU=ON L4
L6
             15 SEA FILE=HCAPLUS ABB=ON PLU=ON L5(L)(?DIABET? OR BLOOD(W)SUGA
                R)
             62 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (?DIABET? OR BLOOD(W)SU
L7
                GAR)
L9
             42 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND (?MEDIC? OR ?PHARM? OR
                ?DRUG? OR ?THERAP?)
L10
             31 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 NOT L6
            428 SEA FILE=HCAPLUS ABB=ON PLU=ON L5(L)(?MEDIC? OR ?PHARM? OR
L11
                ?DRUG? OR ?THERAP?)
L12
              9 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 AND L10
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# => d ibib abs hitrn 112 1-9

L12 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2002:185688 HCAPLUS

DOCUMENT NUMBER: 136:252567

TITLE: Methods for drug administration and

distribution based on monitoring blood viscosity and

other parameters for diagnostics and treatment

INVENTOR(S): Kensey, Kenneth

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S.

Ser. No. 819,924.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

4

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002032149 CA 2301161 JP 2001514384 NO 2000000944 US 2001039828 US 2002007664 PRIORITY APPLN. INFO	A1 AA T2 A A1 A1 A1	20020314 19990304 20010911 20000225 20011115 20020124	JP 2000-507994 NO 2000-944 US 2001-789350 US 2001-897164	20010424 19980826 19980826 20000225 20010221 20010702 19970828

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A2 19991112
US 1999-439795
               A2 20000210
US 2000-501856
               A2 20000801
US 2000-628401
               A2 20001201
US 2000-727950
               A2 20010328
US 2001-819924
US 1997-966076 A 19971107
WO 1998-US17657 W 19980826
                A 20000329
KR 2000-16044
               P 20000828
US 2000-228612P
               A2 20010221
US 2001-789350
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Various methods are provided for detg. and utilizing the viscosity of the AΒ circulating blood of a living being, i.e., a human, over a range of shear rates for diagnostics and treatment, such as detecting/reducing blood viscosity, work of the heart, contractility of the heart, for detecting/reducing the surface tension of the blood, for detecting plasma viscosity, for explaining/countering endothelial cell dysfunction, for providing high and low blood vessel wall shear stress data, red blood cell deformability data, lubricity of blood, and for treating different ailments such as peripheral arterial disease in combination with administering to a living being at least one pharmaceutically acceptable agent. Agents pharmaceutically effective to regulate at least one of the afore mentioned blood parameters are used to adjust distribution of a substance through the bloodstream. For example, when blood viscosity is a blood flow parameter monitored, an agent is selected from i.v. diluents, red blood cell deformability agents, antiurea agents, oral contraceptives, antidiabetic agents, antiarrhythmics, antihypertensives, antihyperlipidemics, antiplatelet agents, appetite suppressants, antiobesity agents, blood modifiers, smoking deterrent agents, and nutritional supplements.

IT 144701-48-4, Telmisartan

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (app. and methods for monitoring blood viscosity and other parameters in **drug** delivery for diagnostics and treatment)

L12 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2002:157602 HCAPLUS

DOCUMENT NUMBER:

136:205430

TITLE:

Pharmaceutical compositions containing

AT-receptor antagonist or insulin secretion enhancers

INVENTOR(S): Allison PATENT ASSIGNEE(S): Novart

Allison, Malcolm; Gatlin, Marjorie Regan Novartis A.-G., Switz.; Novartis-Erfindungen

Verwaltungsgesellschaft m.b.H.

SOURCE:

PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2002015933 A2 20020228 WO 2001-EP9587 20010820

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG A 20000822 PRIORITY APPLN. INFO.: US 2000-643641 A pharmaceutical compn. comprises as active ingredients an AT1-receptor antagonist or a salt, an insulin secretion enhancer or a its salt or an insulin sensitizer or its salt. Thus, tablets contained Starlix DS 60, lactose monohydrate 141.5, microcryst. cellulose 71, Povidone-K30 12, and Croscarmellose sodium 18.4, colloidal SiO2 6.4, Mg stearate 5.7, and Opadry 9 mg. 144701-48-4, Telmisartan TΤ RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical compns. contg. AT-receptor antagonist or insulin secretion enhancers) L12 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2002 ACS 2002:157563 HCAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 136:194251 TITLE: Pharmaceutical combination of angiotensin II antagonists and angiotensin I converting enzyme inhibitors Boehm, Peter; Meinicke, Wolf Thomas; Riedel, Axel INVENTOR(S): Boehringer Ingelheim Pharma K.-G., Germany PATENT ASSIGNEE(S): PCT Int. Appl., 20 pp. SOURCE: CODEN: PIXXD2 DOCUMENT TYPE: Patent English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: PATENT NO. APPLICATION NO. DATE KIND DATE -----\_\_\_\_\_ WO 2002015891 A2 20020228 WO 2001-EP9428 20010816 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG PRIORITY APPLN. INFO.: GB 2000-20691 A 20000822 DE 2001-10108215 A 20010220 AΒ The invention relates to a method of treatment of indications which can be pos. influenced by inhibition of AT1 mediated effects with maintenance of AT2 receptor mediated effects of angiotensin II and by ACE inhibition, thus also increasing bradykinin mediated effects, e.g. to reduce the incidence of stroke, acute myocardial infarction or cardiovascular death, or of indications assocd. with the increase of AT1 receptors in the sub-epithelial area or increase of AT2 receptors in the epithelia, comprising co-administration of effective amts. of an angiotensin II antagonist and an ACE inhibitor, pharmaceutical compns. contg. an Angiotensin II antagonist together with an ACE inhibitor and the use of an Angiotensin II antagonist and an ACE inhibitor for the manuf. of corresponding pharmaceutical compns. TΤ 144701-48-4, Telmisartan RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical combination of angiotensin II antagonists and

angiotensin I converting enzyme inhibitors)

L12 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2002 ACS 2001:762798 HCAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 135:308910 TITLE: Pharmaceutical compositions containing an aldosterone synthase inhibitor and an AT1-receptor antagonist Steele, Ronald Edward INVENTOR(S): Novartis A.-G., Switz.; Novartis-Erfindungen PATENT ASSIGNEE(S): Verwaltungsgesellschaft m.b.H. SOURCE: PCT Int. Appl., 25 pp. CODEN: PIXXD2 Patent DOCUMENT TYPE: English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE WO 2001076574 A2 20011018 WO 2001-EP4116 20010410 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG PRIORITY APPLN. INFO.: US 2000-196742P P 20000412 AB The invention relates to a pharmaceutical compn., of (i) an aldosterone synthase inhibitor or a pharmaceutically acceptable salt thereof either alone or in combination with (ii) an AT1-receptor antagonist combined with a diuretic, or in each case, a pharmaceutically acceptable salt thereof and (iii) a pharmaceutically acceptable carrier. A pharmaceutical compn. comprising an aldosterone synthase inhibitor or a pharmaceutically acceptable salt thereof is used for the prevention of, delay of progression of, and treatment of a disease or condition selected from the group consisting of hypertension, congestive heart failure, renal failure, esp. chronic renal failure, restenosis after percutaneous transluminal angioplasty, and restenosis after coronary artery bypass surgery, atherosclerosis, insulin resistance and syndrome X, diabetes mellitus type 2, obesity, nephropathy, hypothyroidism, myocardial infarction, etc. For example, a hard gelatin capsules were prepd. contg. valsartan 80.0 mg, microcryst. cellulose 110.0 mg, Polyvidone K30 45.2 mg, sodium lauryl sulfate 1.2 mg, crospovidone 26.0 mg, and magnesium stearate 2.6 mg by a granulation method. 135070-05-2, E 1477 144701-48-4, Telmisartan ΙT RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (oral compns. contg. aldosterone synthase inhibitor and AT1-receptor antagonist for therapeutic uses) L12 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:762797 HCAPLUS DOCUMENT NUMBER: 135:308909

Page 34

Pharmaceutical combinations containing

TITLE:

Sudhaker 10 018688-b AT1-receptor antagonist INVENTOR(S): De Gasparo, Marc; Graves, Kurt C. Novartis A.-G., Switz.; Novartis-Erfindungen PCT Int. Appl., 29 pp. PATENT ASSIGNEE(S): SOURCE: CODEN: PIXXD2 DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: PATENT INFORMATION: APPLICATION NO. DATE PATENT NO. KIND DATE ----------\_\_\_\_ \_\_\_\_\_ -----WO 2001-EP4115 20010410 A2 20011018 WO 2001076573 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG PRIORITY APPLN. INFO.: US 2000-196743P P 20000412 The invention relates to a combination of at least 2 therapeutic AB combination components selected from the group consisting of an AT1-receptor antagonist or an AT1 receptor antagonist combined with a diuretic or, in each case, a salt, a HMG-CoA reductase inhibitor or a salt and an ACE inhibitor or a salt for the prevention of, delay of progression of, treatment of selected diseases and conditions. Thus, tablets were prepd. by granulation of the mixt. of valsartan 80.00, Avicel PH-102 54.00 Crospovidone 20.00, Aerosil-200 0.75, and Mg stearate 2.5 mg/unit, and blending this compn. with a mixt. of Aerosil-200 0.75, Mg stearate 2.00, and Diolack pale red 00F34899 7.00 mg/unit. 135070-05-2, E 1477 144701-48-4, Telmisartan IT RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical combinations contg. AT1-receptor antagonist) L12 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2002 ACS 2001:396644 HCAPLUS ACCESSION NUMBER: 135:24671 DOCUMENT NUMBER: Solid carriers for improved delivery of active TITLE: ingredients in pharmaceutical compositions Patel, Manesh V.; Chen, Feng-jing INVENTOR(S): PATENT ASSIGNEE(S): Lipocine, Inc., USA PCT Int. Appl., 107 pp. SOURCE: CODEN: PIXXD2 DOCUMENT TYPE: Patent English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

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. PATENT NO.
              KIND DATE
                                     APPLICATION NO. DATE
                                     WO 2000-US32255 20001122
 WO 2001037808 A1 20010531
     W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
         CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
         HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
         LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
         SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
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ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                             US 1999-447690 19991123
                              20010619
                                                           A 19991123
PRIORITY APPLN. INFO.:
                                           US 1999-447690
     The present invention provides solid pharmaceutical compns. for
     improved delivery of a wide variety of pharmaceutical active
     ingredients contained therein or sep. administered. In one embodiment,
     the solid pharmaceutical compn. includes a solid carrier, the
     solid carrier including a substrate and an encapsulation coat on the
     substrate. The encapsulation coat can include different combinations of
     pharmaceutical active ingredients, hydrophilic surfactant,
     lipophilic surfactants and triglycerides. In another embodiment, the solid pharmaceutical compn. includes a solid carrier, the solid
     carrier being formed of different combinations of pharmaceutical
     active ingredients, hydrophilic surfactants, lipophilic surfactants and
     triglycerides. The compns. of the present invention can be used for
     improved delivery of hydrophilic or hydrophobic pharmaceutical
     active ingredients, such as drugs, nutritionals, cosmeceuticals
     and diagnostic agents. A compn. contained glyburide 1, PEG 40 stearate
     33, glycerol monolaurate 17, and nonpareil seed 80 g.
     144701-48-4, Telmisartan
ΙT
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (solid carriers for improved delivery of active ingredients in
        pharmaceutical compns.)
                                 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
REFERENCE COUNT:
                           4
                                 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
L12 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2002 ACS
                           2000:608551 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
                           133:213151
TITLE:
                           Pharmaceutical compositions and methods for
                           improved delivery of hydrophobic therapeutic
                           agents
                           Patel, Manesh V.; Chen, Feng-Jing
INVENTOR(S):
                           Lipocine, Inc., USA
PATENT ASSIGNEE(S):
                           PCT Int. Appl., 98 pp.
SOURCE:
                           CODEN: PIXXD2
DOCUMENT TYPE:
                           Patent
LANGUAGE:
                           English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                       KIND
                              DATE
                                              APPLICATION NO. DATE
                       A1
                              20000831
                                            WO 2000-US165 20000105
     WO 2000050007
             AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
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              IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
              MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
              SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
              BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
              DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
              CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                             US 1999-258654
     US 6294192
                              20010925
                                                                19990226
                        В1
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

EP 2000-901394

20000105

20011205

Α1

EP 1158959

IE, SI, LT, LV, FI, RO US 2002012680 A1 20020131 US 2001-898553 20010702 US 1999-258654 A 19990226 PRIORITY APPLN. INFO.: W 20000105 WO 2000-US165 The present invention relates to triglyceride-free pharmaceutical compns. for delivery of hydrophobic therapeutic agents. Compns. of the present invention include a hydrophobic therapeutic agent and a carrier, where the carrier is formed from a combination of a hydrophilic surfactant and a hydrophobic surfactant. Upon diln. with an aq. solvent, the compn. forms a clear, aq. dispersion of the surfactants contg. the therapeutic agent. The invention also provides methods of treatment with hydrophobic therapeutic agents using these compns. A pharmaceutical compn. contained cyclosporin 0.14, Cremophor RH-40 0.41, Arlacel186 0.29, sodium taurocholate 0.26, and propylene glycol 0.46 mg. ΙT 144701-48-4, Telmisartan RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical compns. and methods for improved delivery of hydrophobic therapeutic agents) THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 4 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L12 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2002 ACS 1988:124074 HCAPLUS ACCESSION NUMBER: 108:124074 DOCUMENT NUMBER: General pharmacology of 1-(2-ethoxyethyl)-2-TITLE: (4-methyl-1-homopiperazinyl)benzimidazole difumarate. 2nd Communication: Effects on the circulation and the other systems Saito, T.; Fukuda, T.; Tajima, S.; Sukamoto, T.; AUTHOR(S): Yamashita, A.; Kanazawa, T.; Morimoto, Y.; Shimohara, K.; Nishimura, N.; et al. CORPORATE SOURCE: Pharm. Res. Cent., Kanebo Ltd., Osaka, Japan Arzneim.-Forsch. (1988), 38(2), 267-72 SOURCE: CODEN: ARZNAD; ISSN: 0004-4172 DOCUMENT TYPE: Journal LANGUAGE: English The title drug (KB-2413) as well as ketotifen and chlorpheniramine transiently inhibited respiration at 3 mg/kg, i.v., and slightly decreased blood pressure in dogs. KB-2413 slightly decreased heart rate in dogs, but ketotifen slightly increased it. KB-2413, at 100 mg/kg orally, slightly decreased the vol. of gastric juice in rats and dose-dependently increased biliary secretion in rats at 10-100 mg/kg. Ketotifen and chlorpheniramine decreased biliary secretion. KB-2413 inhibited the spontaneous movements of various isolated smooth muscles at a high concn. (10-4 g/mL). The autonomic system in cats and the motor nervous system in rats were not influenced by KB-2413 at 3 mg/kg, i.v. The blood clotting system, blood sugar level, urine vol., and urinary electrolytes in rats were not affected by KB-2413 at 10-100 mg/kg, orally. KB-2413 inhibited carrageenin-induced rat paw edema at 100 mg/kg orally. In conclusion, KB-2413 showed less potent effects on the circulation and the other systems than ketotifen and chlorpheniramine, and apparently has no serious side effects. ΙT 87233-62-3, KB 2413 RL: BIOL (Biological study) (circulation response to and pharmacol. of)

1973:473473 HCAPLUS

L12 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:

DOCUMENT NUMBER:

CORPORATE SOURCE:

79:73473

TITLE:

Cyclophosphates. V. In vivo metabolic and

cardiovascular effects of new cyclophosphates

AUTHOR(S):

Paoletti, R.; Berti, F.; Spano, P. F.

Inst. Pharmacol. Pharmacognosy, Univ. Milan, Milan, Italy

SOURCE:

Pharmacol. Res. Commun. (1973), 5(1), 87-100

CODEN: PLRCAT

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Studies on the metabolic and cardiovascular effects of cyclic nucleotides in the rat revealed that only cyclic 3', 5'-AMP (I) [60-92-4] had a pronounced hyperglycemic activity, and that cyclic 3',5'-GMP [7665-99-8] increased the plasma steroid levels to a greater extent than I. A long lasting effect on plasma steroid levels was demonstrated with 6-(3',4'-dimethoxyphenyl)ethylaminocyclic purine-9-riboside-3',5'monophosphate [34051-26-8] at doses where there was no effect on the cardiovascular parameters or blood glucose levels. The av. hyperglycemic effects with 8-substituted nucleotides were lower than those with 6-substituted ones, despite a high resistance to phosphodiesterase [9025-82-5].

31319-97-8 31357-06-9 32115-25-6 38124-16-2 38124-18-4

> RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmacol. of)

=> select hitrn 112 1-9 'HITRN' IS NOT A VALID FIELD CODE FOR FILE 'HCAPLUS' ENTER DISPLAY CODE (TI) OR ?:end

=> select hit rn 112 1-9 E95 THROUGH E102 ASSIGNED

=> fil reg FILE 'REGISTRY' ENTERED AT 20:52:28 ON 26 APR 2002 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2002 American Chemical Society (ACS)

STRUCTURE FILE UPDATES: 25 APR 2002 HIGHEST RN 408304-53-0 DICTIONARY FILE UPDATES: 25 APR 2002 HIGHEST RN 408304-53-0

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s e95-e102

1 144701-48-4/BI (144701-48-4/RN)

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1 135070-05-2/BI
                  (135070-05-2/RN)
             1 31319-97-8/BI
                  (31319-97-8/RN)
             1 31357-06-9/BI
                  (31357-06-9/RN)
             1 32115-25-6/BI
                  (32115-25-6/RN)
             1 38124-16-2/BI
                  (38124-16-2/RN)
             1 38124-18-4/BI
                  (38124-18-4/RN)
             1 87233-62-3/BI
                  (87233-62-3/RN)
L13
             8 (144701-48-4/BI OR 135070-05-2/BI OR 31319-97-8/BI OR 31357-06-9
               /BI OR 32115-25-6/BI OR 38124-16-2/BI OR 38124-18-4/BI OR 87233-
=> d ide can 113 1-8
    ANSWER 1 OF 8 REGISTRY COPYRIGHT 2002 ACS
RN
     144701-48-4 REGISTRY
CN
     [1,1'-Biphenyl]-2-carboxylic acid, 4'-[(1,4'-dimethyl-2'-propyl[2,6'-bi-1H-
     benzimidazol]-1'-yl)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
     4'-[[4-Methyl-6-(1-methyl-2-benzimidazolyl)-2-propyl-1-
CN
     benzimidazolyl]methyl]-2-biphenylcarboxylic acid
CN
     BIBR 277
     BIBR 277SE
CN
CN
     Telmisartan
     3D CONCORD
FS
MF
     C33 H30 N4 O2
SR
LC
                  ADISINSIGHT, ADISNEWS, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
       CAPLUS, CBNB, CHEMINFORMRX, CIN, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU,
       DRUGUPDATES, EMBASE, IPA, MEDLINE, MRCK*, PHAR, PROMT, SYNTHLINE,
       TOXCENTER, USAN, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:
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#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

119 REFERENCES IN FILE CA (1967 TO DATE)
119 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:272916

REFERENCE 2: 136:252567

REFERENCE 3: 136:226254

REFERENCE 4: 136:205430

REFERENCE 5: 136:194252

REFERENCE 6: 136:194251

REFERENCE 7: 136:177691

REFERENCE 8: 136:112467

REFERENCE 9: 136:112466

REFERENCE 10: 136:112440

L13 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **135070-05-2** REGISTRY

CN [1,1'-Biphenyl]-2-carboxylic acid, 4'-[(2-cyclopropyl-7-methyl-3H-imidazo[4,5-b]pyridin-3-yl)methyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3H-Imidazo[4,5-b] pyridine, [1,1'-biphenyl]-2-carboxylic acid deriv. OTHER NAMES:

CN 57G709

CN E 1477

CN E 4177

MF C24 H21 N3 O2

SR CA

LC STN Files: ADISINSIGHT, ANABSTR, BIOSIS, CA, CAPLUS, DRUGNL,

# DRUGUPDATES, EMBASE, MEDLINE, PHAR, TOXCENTER, USPATFULL

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Me
N CH<sub>2</sub>
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#### \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

38 REFERENCES IN FILE CA (1967 TO DATE)
38 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:308910

REFERENCE 2: 135:308909

REFERENCE 3: 133:140268

REFERENCE 4: 133:129687

REFERENCE 5: 133:79362

REFERENCE 6: 133:68961

REFERENCE 7: 132:175862

REFERENCE 8: 132:102609

REFERENCE 9: 132:102605

REFERENCE 10: 132:31209

L13 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **87233-62-3** REGISTRY

CN 1H-Benzimidazole, 1-(2-ethoxyethyl)-2-(hexahydro-4-methyl-1H-1,4-diazepin-1-yl)-, (2E)-2-butenedioate (1:2) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1H-1,4-Diazepine, 1H-benzimidazole deriv.

CN 1H-Benzimidazole, 1-(2-ethoxyethyl)-2-(hexahydro-4-methyl-1H-1, 4-diazepin-1-yl)-, (E)-2-butenedioate (1:2)

OTHER NAMES:

CN AL 3432A

CN Emedastine difumarate

CN KB 2413

CN KG 2413

CN LY 188695

CN Rapimine

FS STEREOSEARCH

MF C17 H26 N4 O . 2 C4 H4 O4

CI COM

LC STN Files: ADISINSIGHT, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,

BIOTECHNO, CA, CAPLUS, CASREACT, CIN, DDFU, DIOGENES, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA, MRCK\*, PHAR, PROMT, RTECS\*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

CM 1

CRN 87233-61-2 CMF C17 H26 N4 O

CM 2

CRN 110-17-8 CMF C4 H4 O4

Double bond geometry as shown.

$$_{\rm HO_2C}$$
  $^{\rm E}$   $_{\rm CO_2H}$ 

59 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

59 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:226461

REFERENCE 2: 136:95744

REFERENCE 3: 136:708

REFERENCE 4: 135:251374

REFERENCE 5: 135:127234

REFERENCE 6: 134:242717

REFERENCE 7: 133:242724

REFERENCE 8: 133:94398

REFERENCE 9: 132:212608

REFERENCE 10: 131:165275

L13 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN 38124-18-4 REGISTRY

CN Guanosine, 8-(4-morpholinyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, guanosine deriv.

OTHER NAMES:

CN 8-Morpholino-guanosine-cyclic-3',5'-monophosphate

CN 8-Morpholinoguanosine 3',5'-monophosphate

FS STEREOSEARCH

DR 77836-29-4

MF C14 H19 N6 O8 P

LC STN Files: CA, CAPLUS

Absolute stereochemistry.

5 REFERENCES IN FILE CA (1967 TO DATE)

5 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 104:2775

REFERENCE 2: 95:2508

REFERENCE 3: 81:59961

REFERENCE 4: 79:73473

REFERENCE 5: 77:135120

L13 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **38124-16-2** REGISTRY

CN Guanosine, 8-(1-piperidinyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, guanosine deriv.

OTHER NAMES:

CN 8-Piperidino-guanosine-cyclic-3',5'-monophosphate

CN 8-Piperidinocyclic GMP

CN Cyclic 8-piperidino-3',5'-GMP

FS STEREOSEARCH

MF C15 H21 N6 O7 P

LC STN Files: CA, CAPLUS

Absolute stereochemistry.

3 REFERENCES IN FILE CA (1967 TO DATE)

3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 89:123843

REFERENCE 2: 79:73473

REFERENCE 3: 77:135120

L13 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **32115-25-6** REGISTRY

CN Inosine, 8-(1-piperidinyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, inosine deriv.

CN Inosine, 8-piperidino-, cyclic 3',5'-(hydrogen phosphate) (8CI)

OTHER NAMES:

CN 8-Piperidinoinosine 3',5'-monophosphate

CN 8-Piperidinoinosine cyclic 3',5'-phosphate .

CN Cyclic 8-piperidino-3',5'-IMP

FS STEREOSEARCH

MF C15 H20 N5 O7 P.

LC STN Files: CA, CAPLUS

# Absolute stereochemistry.

4 REFERENCES IN FILE CA (1967 TO DATE)

4 REFERENCES IN FILE CAPLUS .(1967 TO DATE)

REFERENCE 1: 81:59961

REFERENCE 2: 79:73473

REFERENCE 3: 74:94726

REFERENCE 4: 74:28243

L13 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **31357-06-9** REGISTRY

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine.deriv.

CN Adenosine, 8-piperidino-, cyclic 3',5'-(hydrogen phosphate) (8CI)

OTHER NAMES:

CN 8-Piperidino-cyclic AMP

CN 8-Piperidinoadenosine 3',5'-monophosphate

CN Cyclic 8-piperidino-3',5'-AMP

FS STEREOSEARCH

MF C15 H21 N6 O6 P

LC STN Files: BIOSIS, CA, CAPLUS, CHEMCATS, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER

## Absolute stereochemistry.

28 REFERENCES IN FILE CA (1967 TO DATE)

28 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 133:234318

REFERENCE 2: 131:208914

REFERENCE 3: 129:285575

REFERENCE 4: 127:12971

REFERENCE 5: 125:4332

REFERENCE 6: 124:336374

REFERENCE 7: 124:282685

REFERENCE 8: 124:21042

REFERENCE 9: 124:5727

REFERENCE 10: 122:306277

L13 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2002 ACS

RN **31319-97-8** REGISTRY

CN Inosine, 8-(4-morpholinyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, inosine deriv.

CN Inosine, 8-morpholino-, cyclic 3',5'-(hydrogen phosphate) (8CI) OTHER NAMES:

CN 8-Morpholinoinosine 3',5'-monophosphate

CN 8-Morpholinoinosine cyclic 3',5'-phosphate

CN Cyclic 8-morpholino-3',5'-IMP

FS STEREOSEARCH

MF C14 H18 N5 O8 P

LC STN Files: CA, CAPLUS

Absolute stereochemistry.

- 3 REFERENCES IN FILE CA (1967 TO DATE)
- 3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 79:73473

REFERENCE 2: 74:94726

REFERENCE 3: 74:28243

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=> d stat que 117

L16 2 SEA FILE=REGISTRY ABB=ON PLU=ON L15 AND (METHYL?(L)DIHYDRO?

OR PROPEN? (L) ETHYN?)

L17 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L16

=>

=> d ibib abs hitrn 117

L17 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:31502 HCAPLUS

DOCUMENT NUMBER: 134:100881

TITLE: Preparation of fused imidazole compounds and remedies

for diabetes mellitus

INVENTOR(S): Asano, Osamu; Harada, Hitoshi; Yoshikawa, Seiji;

Watanabe, Nobuhisa; Inoue, Takashi; Horizoe, Tatsuo;

Yasuda, Nobuyuki; Oohashi, Kaya; Minami, Hiroe; Nagaoka, Junsaku; Murakami, Manabu; Kobayashi, Seiichi; Tanaka, Isao; Kawata, Tsutomu; Shimomura, Naoyuki; Akamatsu, Hirofumi; Ozeki, Naoki; Shimizu, Toshikazu; Hayashi, Kenji; Haga, Toyokazu; Negi,

Shigeto; Naito, Toshihiko

PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan

SOURCE: PCT Int. Appl., 130 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2001002400 A1 20010111 WO 2000-JP4358 20000630 W: AU, BR, CA, CN, HU, IL, JP, KR, MX, NO, NZ, RU, US, ZA

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE

PRIORITY APPLN. INFO.:

JP 1999-188484 A 19990702

JP 2000-143495 A 20000516

JP 2000-182786 A 20000619

OTHER SOURCE(S):

MARPAT 134:100881

GI

$$R^{1}$$
 $R^{2}$ 
 $R^{3}$ 
 $R^{3}$ 
 $R^{3}$ 

Novel fused imidazole compds. such as purine derivs. of general formula (I), pharmacol. acceptable salts thereof, or hydrates of both [wherein R1 = H, OH, halo, (un) substituted C1-8 alkyl, (un) substituted NH2; R2 = H, halo, (un) substituted NH2, (un) substituted C2-8 alkenyl, (un) substituted C3-8 alkynyl, (un) substituted C1-8 alkyl; R3 = (un) substituted C3-8 alkynyl, C3-8 alkenyl, (un) substituted C1-8 alkyl, (un) substituted aryl, (un) substituted heteroaryl, etc.; Ar = (un) substituted aryl, (un) substituted heteroaryl, optionally halo- or C1-6 alkyl-substituted N-C1-6 alkyl- or N-C3-6 cycloalkyl-oxopyridyl or -oxopyrimidyl; Q, W = N, CH; some proviso are given] are prepd. These compds. exhibit adenosine A2 receptor antagonism and are effective in the prevention and treatment of diabetes mellitus and complications of diabetes. Thus, 5-[6-amino-8-(3-fluorophenyl)-9H-purin-9-yl]-1,2-dihydro-2-pyridinone was condensed with N,N-dimethylformamide di-Me acetal in DMF at room temp. for 1 h, ice-cooled, treated with NaH at 0-6.degree. for 30 min, and methylated by Me iodide at room temp. for 16 h to give 5-[6-amino-8-(3-fluorophenyl)-9H-purin-9-yl]-1-methyl-1,2-dihydro-2pyridinone (II). II.HCl at 10 mg/kg p.o. in spontaneously diabetic mice lowered the blood sugar level to 47.3.+-.7.2% of the control animal.

IT 318468-38-1P 318468-39-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of fused imidazole compds. as antagonists of adenosine A2 receptors and remedies for diabetes mellitus)

REFERENCE COUNT:

medies for diabetes mellitus)
26 THERE ARE 26 CITED REFE

THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can 116 1-2

L16 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS

RN 318468-39-2 REGISTRY

CN Cyclobutanol, 1-[[6-amino-8-(3-fluorophenyl)-9-(2-propenyl)-9H-purin-2-yl]ethynyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C20 H18 F N5 O

CI COM

SR CA

LC STN Files: CA, CAPLUS

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:100881

L16 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2002 ACS

RN 318468-38-1 REGISTRY

CN Cyclobutanol, 1-[[6-amino-8-(3-fluorophenyl)-9-(2-propenyl)-9H-purin-2-yl]ethynyl]-, monohydrochloride (9CI) (CA INDEX NAME)

MF C20 H18 F N5 O . Cl H

SR CA

LC STN Files: CA, CAPLUS

CRN (318468-39-2)

$$C = CH - CH_2$$

$$N = N$$

$$NH_2$$

● HCl

- 1 REFERENCES IN FILE CA (1967 TO DATE)
  1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 134:100881